The European patent system: What role for patents in times of Artificial Intelligence, climate change and other global challenges?

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Agenda

Patent law & AI
• See presentation by Lea Tochtermann

Patent law & climate change

Three unresolved institutional problems in European patent law
Climate change and its consequences

Climate tipping elements:
What are they and how worried should we be?

- Most immediate threats
- Threshold in distant future
- Disastrous, yet uncertain
- Competing factors at play
- More research needed
- Gradual changes

• http://blogs.edf.org/climate411/files/2017/10/Climate_tipping_map_01.jpg
Patent law & climate change

Technology

- Is the main reason for anthropogenic climate change.
- But may also contribute to a solution.
- „Climate-relevant“ technologies highly diverse: Reduction of emissions, but also mitigating/adapting to climate changes.
  - Difficult to define where law should intervene.

Patent law

- Is one – not the most important – element influencing generation, dissemination and publication of new technologies.
- Despite debate, Kyoto and Paris Agreements do not address IP.
  - Only financial support (Art 9) and technology transfer (Art 10 Paris Agreement).
- Other IP and competition laws are (at least equally) relevant:
  - Labelling requirements and certification marks,
  - Public procurement and transparency of government.
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Two possible issues:

• The incentive side:
  • Does patent law give the right incentives to develop „climate-friendly“ technology?
  • Should patent law reduce incentives to develop non-climate-friendly technologies?

• The dissemination side:
  • Does patent law foster or hinder technology dissemination, in particular to less-developed countries?

• Issues are not new:
  • Earlier debate about market vs non-market incentives and that market demand may not reflect social value.
  • Earlier debate about IP & technology transfer (access to medicines), see Doha declaration; Art 31bis, 66(2) TRIPS; earlier chapter 34 of Agenda 21 (Earth Summit 1992); Montreal Protocol on Ozone Layer (1987).
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The incentive (grant) side – general scepticism

• **Claim:** Despite increased patent applications, patent system underperforms in fostering environmental innovation.
  • Reason: patent system relies on market (demand) incentives, fails to reward basic research or social value of invention.
    • Change to system of prizes (eg H-Prize)?
    • More drastically: “We must begin taking aggressive action to break patents that hinder a just transition away from fossil fuels, whether nationally or internationally”.

• **Answer:** True, but not a climate-change specific issue.
  • Market demand still important to convey information about needs.
  • Market demand can be supported by emissions trading and other instrument (internalisation of environmental harm).
  • Patent law is not the only instrument to foster innovation; government research funding at least equally important.
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The incentive (grant) side – some options (AIPPI Q 198, May 14)

• **Option 1**: Accelerate granting process for green inventions.
  • Problem: what is a „green invention“? Sufficient to declare ecological benefit? Already accelerated procedure at EPO.

• **Option 2**: Lower the patentability conditions so that obvious inventions could be patented?
  • Unclear what is rewarded here. Weak patents are a problem for innovation, competition and the general public.

• **Option 3**: Extending or reducing patent term?
  • Reduction: Art. 33 TRIPS. Extension: Not clear why.

• **Option 4**: Exclude polluting inventions under ordre public?
  • Difficult to define, often dual use.
  • Other regulation (environmental law) more appropriate.
  • Vice versa, exclude climate-friendly tech (geoengineering)?
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The dissemination (scope and licensing) side

• Facilitate green technology voluntary licensing (AIPPI).
  • Fiscal incentives, export credit, R&D cooperation, cp Art 66(2) TRIPS.
  • Int’l initiatives (WIPO Green, UNFCCC Climate Tech Centre and Network).
  • Special duty to license if public R&D funds (Bayh-Dole „March-in rights“)?

• Extended compulsory licensing for green technologies?
  • Contra: Limited effect, no patents in developing countries.

• Gap where technology is built in EU and then exported?
  • Art 31(f) TRIPS: „such use shall be authorized predominantly for the supply of the domestic market of the Member authorizing such use“.
  • Art 31bis TRIPS: “obligations (...) under Article 31(f) shall not apply with respect to the grant (...) of a compulsory licence to the extent necessary for the purposes of production of a pharmaceutical product(s) and its export to an eligible importing Member(s) (...).”
  • Extension of manufacturing waiver (Art 5 Reg 2019/933)? Art. 28,30 TRIPS?

• Extension of exhaustion world-wide? Robust experimental use? FRAND-type license requirement for „green“ technology?
Three unresolved institutional issues

Relationship between EPC and EU law, esp. Dir 98/44/EC

• Debate on patentability of plants or animals exclusively obtained by means of an essentially biological process continues.
  • COM Notice (OJ C 411, 8.11.2016, p. 3) and Council conclusions (OJ C 65, 1.3.2017, p. 2): EU legislator’s intention (…) was to exclude from patentability products obtained through essentially biological processes.
  • Rule 28(2) EPC: Under Article 53(b), European patents shall not be granted in respect of plants or animals exclusively obtained by means of an essentially biological process.
  • EPO 5.12.2018 Case T-1063/18: Rule 28(2) in conflict with Art 53(b) EPC as interpreted by Enlarged Board of Appeal in G 2/12 (Tomato II) and G 2/13 (Broccolo II)?

• EU has to decide whether to follow EPO or lead in Biotech matters.
• If reform of Dir 98/44 is politically not possible, why not adopt informal notices as „soft guidance“ if new technology appears?
• Next possible issue: application of Dir 98/44/EC on synthetic biology.
Three unresolved institutional issues

Patent law and constitutional guarantees

• Judicial control of EPO decisions in independent court is needed.
  • NL: trade union cases; D: constitutional complaint.
  • UPC will not solve the problem: Not all EU/EPO Member States participate, and UPC has not – at least for transition phase – jurisdiction for all EPC patents.

Art 24(4) Brussels Ibis Reg makes patent litigation too expensive

• Allowing courts to make inter partes decisions on validity of foreign registered IP rights could significantly reduce litigation costs.
• UPC will not solve the problem because not all EU Member States take part and because national patents are outside of UPC system.